

APPENDIX A

Amended Version

[0005] This problem is solved ~~[[i]]~~ in accordance with the invention by a method in which the iron-laden spent sulfuric acid or iron-containing processing products obtained therefrom are reacted with a material that contains iron chlorides and optionally other metal chlorides, whereby iron (II) sulfate is obtained. HCl is preferably obtained in addition in this way, and this can be separated and reused in gaseous form and/or as aqueous hydrochloric acid.

Clean Version

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Amended Version

[0014] Initially, iron (II) chloride and other metal chlorides can be separated as solids from the pickling solution. The solid matter is then dissolved in the spent sulfuric acid at elevated room temperature, and then iron (II) sulfate is precipitated by reducing the temperature.

Alternatively, the pickling solution can be reacted directly with the spent sulfuric acid. Then, iron (II) sulfate is precipitated by reducing the temperature. As a result of a suitable selection of the parameters, a situation can be achieved in which the iron sulfate crystallizes out essentially in the form of iron sulfate heptahydrate. However, the reaction conditions ~~[[wars]]~~ can also be configured in such a way that predominately iron sulfate monohydrate crystallizes out. The selection of the parameters naturally depends on the requirements of the iron sulfate in regard to its further usage. High temperatures during the reaction and high concentrations of sulfuric acid ~~[[ravor]]~~ favor the crystallization of iron sulfate monohydrate, while low

temperatures during the reaction and low concentrations of sulfuric acid favor the crystallization of iron sulfate heptahydrate.

Clean Version

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Alternatively, the pickling solution can be reacted directly with the spent sulfuric acid. Then, iron (II) sulfate is precipitated by reducing the temperature. As a result of a suitable selection of the parameters, a situation can be achieved in which the iron sulfate crystallizes out essentially in the form of iron sulfate heptahydrate. However, the reaction conditions can also be configured in such a way that predominately iron sulfate monohydrate crystallizes out. The selection of the parameters naturally depends on the requirements of the iron sulfate in regard to its further usage. High temperatures during the reaction and high concentrations of sulfuric acid favor the crystallization of iron sulfate monohydrate, while low temperatures during the reaction and low concentrations of sulfuric acid favor the crystallization of iron sulfate heptahydrate.
